

WHAT IS CLAIMED IS:

1. An isolated antibody which binds to a polypeptide having at least 80% amino acid sequence identity to:

(a) the amino acid sequence shown in Figure 5 (SEQ ID NO:5), Figure 6 (SEQ ID NO:6), Figure 7 (SEQ ID NO:7), or Figure 8 (SEQ ID NO:8);

(b) the amino acid sequence shown in Figure 5 (SEQ ID NO:5), Figure 6 (SEQ ID NO:6), Figure 7 (SEQ ID NO:7), or Figure 8 (SEQ ID NO:8), lacking its associated signal peptide;

(c) an amino acid sequence of the extracellular domain of the polypeptide shown in Figure 5 (SEQ ID NO:5), Figure 6 (SEQ ID NO:6), Figure 7 (SEQ ID NO:7), or Figure 8 (SEQ ID NO:8), with its associated signal peptide;

(d) an amino acid sequence of the extracellular domain of the polypeptide shown in Figure 5 (SEQ ID NO:5), Figure 6 (SEQ ID NO:6), Figure 7 (SEQ ID NO:7), or Figure 8 (SEQ ID NO:8), lacking its associated signal peptide;

(e) an amino acid sequence encoded by the nucleotide sequence shown in Figure 1 (SEQ ID NO:1), Figure 2 (SEQ ID NO:2), Figure 3 (SEQ ID NO:3), or Figure 4 (SEQ ID NO:4);

(f) an amino acid sequence encoded by the full-length coding sequence of the nucleotide sequence shown in Figure 1 (SEQ ID NO:1), Figure 2 (SEQ ID NO:2), Figure 3 (SEQ ID NO:3), or Figure 4 (SEQ ID NO:4);
or

(g) an amino acid sequence encoded by the full-length coding sequence of the cDNA deposited under any ATCC accession number shown in Table 7.

2. The antibody of Claim 1 which binds to a polypeptide comprising:

(a) the amino acid sequence shown in Figure 5 (SEQ ID NO:5), Figure 6 (SEQ ID NO:6), Figure 7 (SEQ ID NO:7), or Figure 8 (SEQ ID NO:8);

(b) the amino acid sequence shown in Figure 5 (SEQ ID NO:5), Figure 6 (SEQ ID NO:6), Figure 7 (SEQ ID NO:7), or Figure 8 (SEQ ID NO:8), lacking its associated signal peptide;

(c) an amino acid sequence of the extracellular domain of the polypeptide shown in Figure 5 (SEQ ID NO:5), Figure 6 (SEQ ID NO:6), Figure 7 (SEQ ID NO:7), or Figure 8 (SEQ ID NO:8), with its associated signal peptide;

(d) an amino acid sequence of the extracellular domain of the polypeptide shown in Figure 5 (SEQ ID NO:5), Figure 6 (SEQ ID NO:6), Figure 7 (SEQ ID NO:7), or Figure 8 (SEQ ID NO:8), lacking its associated signal peptide;

(e) an amino acid sequence encoded by the nucleotide sequence shown in Figure 1 (SEQ ID NO:1), Figure 2 (SEQ ID NO:2), Figure 3 (SEQ ID NO:3), or Figure 4 (SEQ ID NO:4);

(f) an amino acid sequence encoded by the full-length coding sequence of the nucleotide sequence shown in Figure 1 (SEQ ID NO:1), Figure 2 (SEQ ID NO:2), Figure 3 (SEQ ID NO:3), or Figure 4 (SEQ ID NO:4);
or

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(g) an amino acid sequence encoded by the full-length coding sequence of the cDNA deposited under any ATCC accession number shown in Table 7.

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3. The antibody of Claim 1 which is a monoclonal antibody.
- 5 4. The antibody of Claim 1 which is an antibody fragment.
5. The antibody of Claim 1 which is a chimeric or a humanized antibody.
- 10 6. The antibody of Claim 1 which is conjugated to a growth inhibitory agent.
7. The antibody of Claim 1 which is conjugated to a cytotoxic agent.
8. The antibody of Claim 7, wherein the cytotoxic agent is selected from the group consisting of toxins, antibiotics, radioactive isotopes and nucleolytic enzymes.
- 15 9. The antibody of Claim 7, wherein the cytotoxic agent is a toxin.
- 20 10. The antibody of Claim 9, wherein the toxin is selected from the group consisting of maytansinoid and calicheamicin.
11. The antibody of Claim 9 wherein the toxin is a maytansinoid.
12. The antibody of Claim 1 which is produced in bacteria.
- 25 13. The antibody of Claim 1 which is produced in CHO cells.
14. The antibody of Claim 1 which induces death of a cell to which it binds.
15. The antibody of Claim 1 which is detectably labeled.